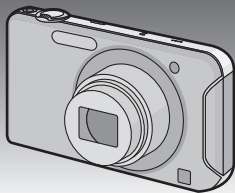


Panasonic®

Basic Operating Instructions Digital Camera

Model No. **DMC-SZ5**

LUMIX



Before use, please read these instructions completely.



More detailed instructions on the operation of this camera are contained in “Operating Instructions for advanced features (PDF format)” in the supplied CD-ROM. Install it on your PC to read it.



Web Site: <http://www.panasonic-europe.com>

Model number suffix “EB” denotes UK model.

EB

VQT4J99
F0712MR0

Dear Customer,

We would like to take this opportunity to thank you for purchasing this Panasonic Digital Camera. Please read these Operating Instructions carefully and keep them handy for future reference. Please note that the actual controls and components, menu items, etc. of your Digital Camera may look somewhat different from those shown in the illustrations in these Operating Instructions.

Carefully observe copyright laws.

- Recording of pre-recorded tapes or discs or other published or broadcast material for purposes other than your own private use may infringe copyright laws. Even for the purpose of private use, recording of certain material may be restricted.

Information for Your Safety

WARNING:

To reduce the risk of fire, electric shock or product damage,

- Do not expose this unit to rain, moisture, dripping or splashing.
- Use only the recommended accessories.
- Do not remove covers.
- Do not repair this unit by yourself. Refer servicing to qualified service personnel.

The socket outlet shall be installed near the equipment and shall be easily accessible.

■ Product identification marking

Product	Location
Digital Camera	Bottom

CE 1731!

Declaration of Conformity (DoC)

Hereby, "*Panasonic Corporation*" declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Customers can download a copy of the original DoC to our R&TTE products from our DoC server:

<http://www.doc.panasonic.de>

Contact to Authorized Representative:

Panasonic Marketing Europe GmbH, Panasonic Testing Centre, Winsbergring 15,
22525 Hamburg, Germany

This product is intended to be used in the following countries.

Austria, Belgium, France, Germany, Ireland, Italy, Luxembourg, Netherlands,
Portugal, Spain, Switzerland, United Kingdom

In France, this equipment may only be used indoors.

This product is intended for general consumer. (Category 3)

This product on purpose to connect to access point of 2.4 GHz WLAN.

■ About the battery pack

CAUTION

- Danger of explosion if battery is incorrectly replaced. Replace only with the type recommended by the manufacturer.
 - When disposing the batteries, please contact your local authorities or dealer and ask for the correct method of disposal.
-
- Do not heat or expose to flame.
 - Do not leave the battery(ies) in a car exposed to direct sunlight for a long period of time with doors and windows closed.

Warning

Risk of fire, explosion and burns. Do not disassemble, heat above 60 °C or incinerate.

■ About the AC adaptor (supplied)

CAUTION!

To reduce the risk of fire, electric shock or product damage,

- **Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure this unit is well ventilated.**
-
- The unit is in the standby condition when the AC adaptor is connected. The primary circuit is always "live" as long as the AC adaptor is connected to an electrical outlet.

■ Cautions for Use

- Do not use any other USB connection cables except the supplied one or a genuine Panasonic USB connection cable (DMW-USBC1: optional).
- Always use a genuine Panasonic AV cable (DMW-AVC1: optional).

Keep this unit as far away as possible from electromagnetic equipment (such as microwave ovens, TVs, video games etc.).

- If you use this unit on top of or near a TV, the pictures and/or sound on this unit may be disrupted by electromagnetic wave radiation.
- Do not use this unit near cell phones because doing so may result in noise adversely affecting the pictures and/or sound.
- Recorded data may be damaged, or pictures may be distorted, by strong magnetic fields created by speakers or large motors.
- Electromagnetic wave radiation generated by microprocessors may adversely affect this unit, disturbing the pictures and/or sound.
- If this unit is adversely affected by electromagnetic equipment and stops functioning properly, turn this unit off and remove the battery or disconnect AC adaptor (supplied)/AC adaptor (DMW-AC5E: optional). Then reinsert the battery or reconnect AC adaptor and turn this unit on.

Do not use this unit near radio transmitters or high-voltage lines.

- If you record near radio transmitters or high-voltage lines, the recorded pictures and/or sound may be adversely affected.

Information for Users on Collection and Disposal of Old Equipment and used Batteries



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.

For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

[Information on Disposal in other Countries outside the European Union]

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.



Cd

Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

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Before Use

■ Care of the camera

- Do not subject to strong vibration, shock, or pressure.
- This camera is not dust/splash/water proof.
Avoid using the camera in places with a lot of dust, water, sand, etc.

■ About Condensation (When the lens is fogged up)

- Condensation occurs when the ambient temperature or humidity changes. Be careful of condensation since it causes lens stains, fungus and camera malfunction.
- If condensation occurs, turn the camera off and leave it for about 2 hours. The fog will disappear naturally when the temperature of the camera becomes close to the ambient temperature.

Standard Accessories

Check that all the accessories are supplied before using the camera.
Product numbers correct as of July 2012. These may be subject to change.

- 1 Battery Pack
(Indicated as **battery pack** or **battery** in the text)

Charge the battery before use.

- 2 AC Adaptor

Can be used for charging and playback.

- 3 USB Connection Cable

- 4 CD-ROM

- Software
- Operating Instructions for advanced features

Install on your PC before use.

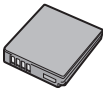


- 5 Hand Strap

- SD Memory Card, SDHC Memory Card and SDXC Memory Card are indicated as **card** in the text.

- **The card is optional.**

You can record or play back pictures on the built-in memory when you are not using a card.

- Consult the dealer or your nearest Service Centre if you lose the supplied accessories. (You can purchase the accessories separately.)

<p>1</p>  <p>DMW-BCK7E</p>	<p>2</p>  <p>VSK0775</p>
<p>3</p>  <p>K1HY08YY0015</p>	
<p>4</p>  <p>VFF1053</p>	<p>5</p>  <p>VFC4297</p>

Sales and Support Information

Customer Communications Centre

- For customers within the UK: 0844 844 3899
- For customers within Ireland: 01 289 8333
- For further support on your product, please visit our website:
www.panasonic.co.uk

Direct Sales at Panasonic UK

- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Communications Centre Monday–Thursday 9:00 a.m.–5:30 p.m., Friday 9:30 a.m.–5:30 p.m. (Excluding public holidays)
- Or go on line through our Internet Accessory ordering application at www.pas-europe.com.
- Most major credit and debit cards accepted.
- All enquiries transactions and distribution facilities are provided directly by Panasonic UK.
- It couldn't be simpler!
- Also available through our Internet is direct shopping for a wide range of finished products. Take a browse on our website for further details.

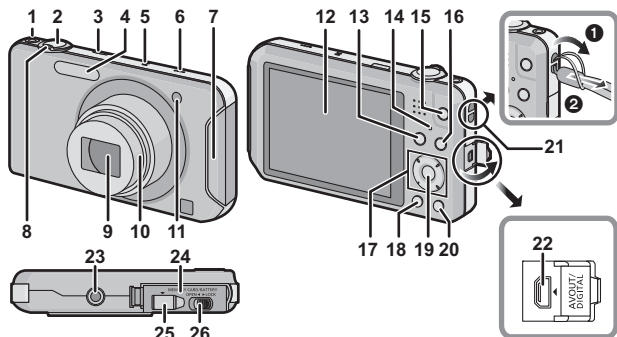
■ Optional Accessories

Battery Pack	DMW-BCK7
AC Adaptor*	DMW-AC5
DC Coupler*	DMW-DCC10
USB Connection Cable	DMW-USBC1
AV Cable	DMW-AVC1
Class 10 64 GB SDXC Memory Card	RP-SDU64GE1K
Class 10 32 GB SDHC Memory Card	RP-SDA32GE1K/RP-SDU32GE1K/RP-SDRA32GEK
Class 10 16 GB SDHC Memory Card	RP-SDA16GE1K/RP-SDU16GE1K/RP-SDRA16GEK
Class 10 8 GB SDHC Memory Card	RP-SDA08GE1K/RP-SDU08GE1K/RP-SDRA08GEK
Class 10 4 GB SDHC Memory Card	RP-SDU04GE1K/RP-SDRA04GEK
Class 4 16 GB SDHC Memory Card	RP-SDNA16GEA
Class 4 8 GB SDHC Memory Card	RP-SDNA08GEA
Class 4 4 GB SDHC Memory Card	RP-SDNA04GEA
Class 4 2 GB SD Memory Card	RP-SDNA02GEA

* The AC Adaptor (optional) can only be used with the designated Panasonic DC Coupler (optional). The AC adaptor (optional) cannot be used by itself.

Some optional accessories may not be available in some countries.

Names and Functions of Main Parts



- | | | | |
|--|--|--|--------------------------------------|
| 1 | Motion picture button | 19 | [MENU/SET] button |
| 2 | Shutter button | 20 | [Q.MENU]/[/↵] (Delete/Cancel) button |
| 3 | Power button | 21 | Strap eyelet |
| 4 | Flash | <ul style="list-style-type: none"> • Be sure to attach the strap when using the camera to ensure that you will not drop it. | |
| 5 | Microphone | 22 | [AV OUT/DIGITAL] socket |
| 6 | Speaker | <ul style="list-style-type: none"> • This socket is also used when charging the battery. | |
| <ul style="list-style-type: none"> • Be careful not to cover the speaker with your finger. Doing so may make sound difficult to hear. | | 23 | Tripod receptacle |
| 7 | Wi-Fi® Transmitter | <ul style="list-style-type: none"> • A tripod with a screw length of 5.5 mm (0.22 inch) or more may damage this unit if attached. | |
| 8 | Zoom lever | 24 | Card/Battery door |
| 9 | Lens | 25 | DC coupler cover |
| 10 | Lens barrel | <ul style="list-style-type: none"> • When using an AC adaptor (DMW-AC5E: optional), ensure that the Panasonic DC coupler (DMW-DCC10: optional) and AC adaptor are used. | |
| 11 | Self-timer indicator
AF Assist Lamp | <ul style="list-style-type: none"> • Always use a genuine Panasonic AC adaptor (DMW-AC5E: optional). | |
| 12 | LCD monitor | 26 | Release lever |
| 13 | [MODE] button | | |
| 14 | Charging lamp
Wi-Fi connection lamp | | |
| 15 | [Wi-Fi] button | | |
| 16 | [] (Playback) button | | |
| 17 | Cursor buttons | | |
| 18 | [DISP.] button | | |

Inserting and Removing the Card (optional)/the Battery

- Check that this unit is turned off.
- We recommend using a Panasonic card.

1 Slide the release lever in the direction of the arrow and open the card/battery door.

- Always use genuine Panasonic batteries (DMW-BCK7E).
- If you use other batteries, we cannot guarantee the quality of this product.

2 **Battery:** Being careful about the battery orientation, insert all the way until you hear a locking sound and then check that it is locked by lever (A). Pull the lever (A) in the direction of the arrow to remove the battery.

Card: Push it securely all the way until you hear a “click” while being careful about the direction in which you insert it.

To remove the card, push the card until it clicks, then pull the card out upright.

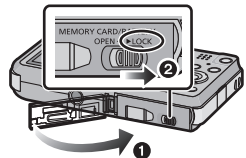
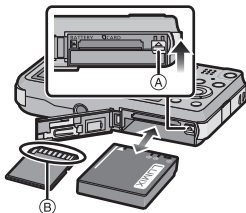
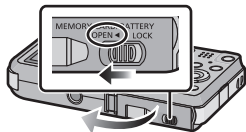
(B): Do not touch the connection terminals of the card.

3 **①:** Close the card/battery door.
②: Slide the release lever in the direction of the arrow.



Note

- Keep the Memory Card out of reach of children to prevent swallowing.

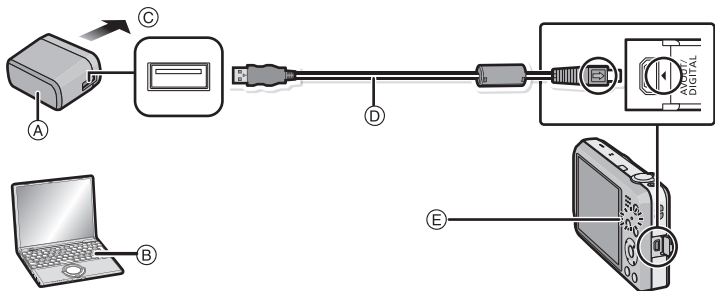


Charging the Battery

- The battery that can be used with this unit is DMW-BCK7E.
- The battery is not charged when the camera is shipped. Charge the battery before use.
- Charge the battery with the AC adaptor (supplied) indoors [10 °C to 30 °C (50 °F to 86 °F)].

- Check that this unit is turned off.

Insert the battery to this unit, and then connect this unit to the AC adaptor (A) (supplied) or a PC (B).



- © To power outlet
- © USB connection cable (supplied)

■ About the charging lamp (E)

Lit red: Charging.

Off: Charging has completed. (Charging time: Approx. 180 min)

When using the AC adaptor (supplied), observe the following points as improper connections may cause malfunctions.

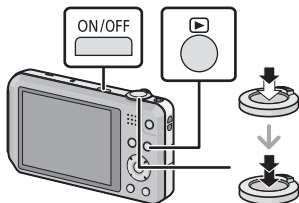
- Do not use any other USB connection cables except the supplied one or a genuine Panasonic USB connection cable (DMW-USBC1: optional).
- Do not use any other AC adaptors except the supplied one.
- Do not use the AC adaptor (supplied) or the USB connection cable (supplied/optional) with other devices.

Sequence of operations

1 Press power button.

- The clock is not set when the camera is shipped. Set the date and time before using the camera.

2 Press the shutter button halfway to focus and then press it fully to take the picture.



■ Selecting the Recording Mode

Press [MODE] to select the Recording Mode.

FA: Take pictures with automatic settings.

O: Take pictures with your own settings.

MINI: Take pictures to make them look like a diorama. (also known as Tilt Shift Focus)

SCN: Take pictures according to scene.

: This mode allows you to improve the appearance of the persons concerned and make their skin tones look healthier.

: Take a portrait emphasising the skin softness.

: This allows you to take pictures of a wide landscape.

: You can take panorama pictures.

: You can take pictures of a fast-moving subject.

: This allows you to take pictures of a person and the background with near real-life brightness.

: This allows you to take vivid pictures of the nightscape.

: This mode allows you to take pictures of food with a natural hue without being affected by the ambient light.

: These take pictures of a baby with a healthy complexion. When you use the flash, the light from it is weaker than usual.

: You can set your pet's birthday and name.

: This allows you to take vivid pictures of the red colour of the sun.

: This mode minimises the jitter of the subjects, and enables you to take pictures of these subjects in dimly lit rooms.

: This mode is best suited for taking pictures through clear glass.

: Record the image with a frame around it.

■ Recording Motion Pictures

Start recording by pressing the motion picture button.

- Stop the recording by pressing the motion picture button again.
 - Maximum time to record motion pictures continuously is 29 minutes 59 seconds. The maximum available recording time continuously is displayed on the screen.
-

■ Setting the Menu

Press [MENU/SET] to display the menu screen to change the recording function, camera settings, and other settings.

■ Playing Back Pictures ([Normal Play])

Press [▶].

- Press ◀ or ▶ to select the picture.
-

■ Deleting Pictures

Select the picture, and then press [🗑️/↶].

- Confirmation screen is displayed. Picture is deleted by selecting [Yes].

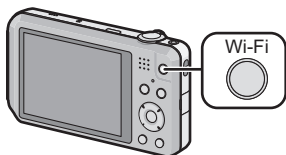
Smartphone operations

You can operate the camera from a smartphone by connecting these two devices via Wi-Fi.

- The connection requires the smartphone application “LUMIX LINK”.
- Refer to the “Wi-Fi connection guide” for the installation of “LUMIX LINK” and the connection with a smartphone.

1 Press and hold [Wi-Fi].

- The screen that notifies the camera is waiting to get connected with a smartphone is displayed.



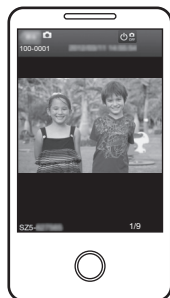
2 Start up “LUMIX LINK” on your smartphone.

- When the connection is complete, images stored in this unit is displayed on the smartphone screen.



■ Operations you can perform on a smartphone

- Read the [Help] in the "LUMIX LINK" menu for further details on how to operate.



* The screen differs depending on the operating system.

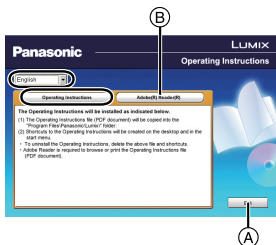
Feature	Description of functions
Wireless shooting	You can record images with this unit by controlling from the smartphone. <ul style="list-style-type: none">• Recorded images are saved in the camera.
Playing back images on a smartphone screen	You can play back images in the camera on a smartphone screen.
Saving images on a smartphone	You can save images in the camera on a smartphone.
Uploading photos on SNS (Social Networking Service)	You can upload images in the camera or a smartphone on SNS.
Setting the menu items	You can set the camera's menu items on a smartphone.
Recording location information	Using the location information function of a smartphone, you can record location information onto the images taken by the camera.

Reading the Operating Instructions (PDF format)

More detailed instructions on the operation of this camera are contained in “Operating Instructions for advanced features (PDF format)” in the supplied CD-ROM. Install it on your PC to read it.

■ For Windows

- 1 Turn the PC on and insert the CD-ROM containing the Operating Instructions (supplied).
 - 2 Click the [Operating Instructions].
 - 3 Select the desired language and then click [Operating Instructions] to install.
- (A) To return to the install menu.
- 4 Double click the “Operating Instructions” shortcut icon on the desktop.



■ When the Operating Instructions (PDF format) will not open

You will need Adobe Acrobat Reader 5.0 or later or Adobe Reader 7.0 or later to browse or print the Operating Instructions (PDF format).

Insert the CD-ROM containing the Operating Instructions (supplied), click (B) and then follow the messages on the screen to install.

(Compatible OS: Windows XP SP3/Windows Vista SP2/Windows 7)

- You can download and install a version of Adobe Reader that you can use with your OS from the following Web Site.

<http://get.adobe.com/reader/otherversions/>

Installing supplied software

- The supplied CD-ROM includes the following software.
 - PHOTOfunSTUDIO 8.4 SE (Windows XP/Vista/7)
 - LoiLoScope 30 day full trial version (Windows XP/Vista/7)
(This will only install a shortcut to the trial version download site.)
- Before inserting the CD-ROM, close all running applications.

1 Check the environment of your PC.

- **Operating environment of “PHOTOfunSTUDIO 8.4 SE”**
 - OS:
 - Windows® XP (32bit) SP3,
 - Windows Vista® (32bit) SP2,
 - Windows® 7 (32bit/64bit) and SP1
 - CPU:
 - Pentium® III 500 MHz or higher (Windows® XP),
 - Pentium® III 800 MHz or higher (Windows Vista®),
 - Pentium® III 1 GHz or higher (Windows® 7)
 - Display:
 - 1024×768 pixels or more (1920×1080 pixels or more recommended)
 - RAM:
 - 512 MB or more (Windows® XP/Windows Vista®),
 - 1 GB or more (Windows® 7 32bit),
 - 2 GB or more (Windows® 7 64bit)
 - Free hard disk space:
 - 450 MB or more for installing software
- Refer to the operating instructions of “PHOTOfunSTUDIO” (PDF) for further operating environment.

2 Insert the CD-ROM with the supplied software.

- When you insert the supplied CD-ROM, the install menu will start.

3 Click on the [Applications] on the install menu.

4 Click on the [Recommended Installation].

- Proceed with installation according to messages appearing on the screen.



Note

- The software compatible with your PC will be installed.
- “PHOTOfunSTUDIO” is not compatible with Mac.

Message Display

Confirmation messages or error messages will be displayed on the screen in some cases.

The major messages are described below as examples.

[Some pictures cannot be deleted]/[This picture cannot be deleted]

- Pictures not based on the DCF standard cannot be deleted.
 - Format the card after saving necessary data on a PC etc.

[Built-in memory full]/[Memory card full]/[Not enough space on built-in memory]/[Not enough memory on the card]

- There is no space left on the built-in memory or the card.
- When you copy pictures from the built-in memory to the card (batch copy), the pictures are copied until the capacity of the card becomes full.

[Memory card error. This card cannot be used in this camera. Format this card?]

- It is a format that cannot be used with this unit.
 - Insert a different card and try again.
 - Reformat on this unit after saving necessary data using a PC, etc. Data will be deleted.

[Please turn camera off and then on again]/[System Error]

- This message appears when the camera is not operating properly.
 - Turn the camera off and on. If the message persists, contact the dealer or your nearest Service Centre.

[Insert SD card again]/[Try another card]

- An error has occurred accessing the card.
 - Insert the card again.
 - Insert a different card.

[This battery cannot be used]

- Use a genuine Panasonic battery. If this message is displayed even when a genuine Panasonic battery is used, contact the dealer or your nearest Service Centre.
- If the battery terminal is dirty, clean it and remove any objects.

[Failed to connect wireless access point]/[Connection failed]/[No destination found]

- Check following regarding the wireless access point.
 - The wireless access point information set on this unit is wrong. Check the authentication type, encryption type, and encryption key.
 - Power of the wireless access point is not turned on.
 - Setting of the wireless access point is not supported by this unit.
- Check the network setting of the destination.
- Radio waves from other devices may block the connection to a wireless access point. Check other devices that are connected to the wireless access point and devices that use the 2.4 GHz band.

Troubleshooting

First, try out the following procedures.

- Check “Troubleshooting” in the “Operating Instructions for advanced features (PDF format)”.

If the problem is not resolved, **it may be improved by selecting [Reset] on the [Setup] menu.**

Battery and power source

**The camera cannot be operated even when it is turned on.
The camera turns off immediately after it is turned on.**

- The battery is exhausted. Charge the battery.
- If you leave the camera on, the battery will be exhausted.
→ Turn the camera off frequently by using the [Auto Power Off].

Card/battery door does not close.

- Insert the battery securely all the way in.

Recording

The picture cannot be recorded.

- Is there any memory remaining on the built-in memory or the card?
→ Delete the pictures which are not necessary to increase available space in the memory.
- You may not be able to record for a short while after turning this unit on when using a large capacity card.

The subject is not focused properly.

- The focus range varies depending on the Recording Mode.
 - Set to the proper mode for the distance to the subject.
- The subject is beyond the focus range of the camera.
- There is camera shake (jitter) or the subject is moving slightly.

The recorded picture is blurred. The Optical Image Stabiliser is not effective.

- The shutter speed becomes slower when pictures are taken in dark places so hold the camera firmly with both hands to take the pictures.
- When taking pictures at a slow shutter speed, use the Self-timer.

The brightness or the hue of the recorded picture is different from the actual scene.

- When recording under fluorescent or LED lighting fixture etc., increasing the shutter speed may introduce slight changes to brightness and colour. These are a result of the characteristics of the light source and do not indicate a malfunction.

Motion picture recording stops in the middle.

- Use a card with SD Speed Class with “Class 4” or higher when recording motion pictures.
- Depending on the type of the card, recording may stop in the middle.
 - If motion picture recording stops during use of a card of at least “Class 4” or if you use a card that has been formatted on a PC or other equipment, the data-writing speed is lower. In such cases, we recommend that you make a backup of the data and then format the card in this unit.

LCD monitor

The LCD monitor becomes darker or brighter for a moment.

- This phenomenon appears when you press the shutter button halfway to set the aperture value and does not affect the recorded pictures.
- This phenomenon also appears when the brightness changes when the camera is zoomed or when the camera is moved. This is because of operation of the automatic aperture of the camera, and it is not a malfunction.

Black, red, blue and green dots appear on the LCD monitor.

- This is not a malfunction.
These pixels do not affect the recorded pictures.

Playback

**The picture is not played back.
The recorded pictures are not displayed.**

- Is there a picture on the built-in memory or the card?
 - The pictures on the built-in memory appear when a card is not inserted. The picture data on the card appears when a card is inserted.
- Is this a folder or picture which was processed in the PC? If it is, it cannot be played back by this unit.
 - It is recommended to use the "PHOTOfunSTUDIO" software in the CD-ROM (supplied) to write pictures from PC to card.
- Has [Filtering Play] been set for playback?
 - Change to [Normal Play].

About the Wi-Fi function

It cannot connect to the wireless LAN. Radio waves get disconnected.

- Use within the communication range of the wireless LAN network.
- Connection types and security setting methods are different depending on the wireless access point.
 - Refer to the operating instructions of the wireless access point.
- When the radio waves are interrupted, the condition may improve by moving the location or changing the angle of the wireless access point.
- It may not automatically connect when the network SSID of the wireless access point is set not to broadcast.
 - Set the network SSID of the wireless access point to broadcast.
- Is any device, such as microwave oven, cordless phone, etc., that uses 2.4 GHz frequency operated nearby?
 - Radio waves may get interrupted when used simultaneously. Use them sufficiently away from the device.
- Is the 5 GHz/2.4 GHz switchable wireless access point connected to other equipment using the 5 GHz band?
 - The use of a wireless access point that can use 5 GHz/2.4 GHz simultaneously is recommended. It cannot be used simultaneously with this camera if it is not compatible.

Others

The clock is reset.

- If you do not use the camera for a long time, the clock may be reset.
 - [Please set the clock] message will be displayed; please reset the clock.

Specifications

Specifications are subject to change without notice.

Digital Camera:

Information for your safety

Power Source:	DC 5.1 V
Power Consumption:	1.1 W (When recording) 0.6 W (When playing back)

Camera effective pixels	14,100,000 pixels	
Image sensor	1/2.33" CCD, total pixel number 14,500,000 pixels, Primary colour filter	
Lens	Optical 10× zoom, f=4.5 mm to 45 mm (35 mm film camera equivalent: 25 mm to 250 mm)/F3.1 (Wide) to F5.9 (Tele)	
Image stabiliser	Optical method	
Focus range	Normal	50 cm (1.6 feet) (Wide)/1.5 m (4.9 feet) (Tele) to ∞ [9× is 2 m (6.6 feet) to ∞]
	Macro/ Intelligent auto/ Motion picture	5 cm (0.16 feet) (Wide)/1.5 m (4.9 feet) (Tele) to ∞ [9× is 2 m (6.6 feet) to ∞]
	Scene Mode	There may be differences in the above settings.
Shutter system	Electronic shutter+Mechanical shutter	
Minimum Illumination	Approx. 10 lx (when i-low light is used, the shutter speed is 1/25th of a second)	
Shutter speed	8 seconds to 1/1600th of a second	
Exposure (AE)	Auto (Programme AE)	
Metering mode	Multiple	
LCD monitor	3.0" TFT LCD (4:3) (Approx. 230,000 dots) (field of view ratio about 100%)	
Microphone	Monaural	
Speaker	Monaural	

Recording media	Built-in Memory (Approx. 55 MB)/SD Memory Card/ SDHC Memory Card/SDXC Memory Card
Recording file format	
Still Picture	JPEG (based on "Design rule for Camera File system", based on "Exif 2.3" standard)/DPOF corresponding
Motion pictures	MP4
Audio compression format	AAC
Interface	
Digital	"USB 2.0" (High Speed) * Data from the PC can not be written to the camera using the USB connection cable.
Analogue video	NTSC/PAL Composite (Switched by menu)
Audio	Audio line output (monaural)
Terminal	
[AV OUT/DIGITAL]	Dedicated jack (8 pin)
Dimensions (excluding the projecting parts)	Approx. 104.1 mm (W)×57.6 mm (H)×20.8 mm (D) [4.1"(W)×2.3"(H)×0.8"(D)]
Mass	Approx. 136 g/0.3 lb (with card and battery) Approx. 120 g/0.27 lb (excluding card and battery)
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Operating humidity	10%RH to 80%RH

Wireless transmitter

Compliance standard	IEEE 802.11b/g/n (standard wireless LAN protocol)
Frequency range used (central frequency)	2412 MHz to 2462 MHz (11ch)
Encryption method	Wi-Fi compliant WPA TM /WPA2 TM
Access method	Infrastructure mode

AC Adaptor (Panasonic VSK0775):

Information for your safety

Input:	~ 110 V to 240 V, 50/60 Hz, 0.2 A
Output:	=== 5 V, 800 mA

Battery Pack (lithium-ion) (Panasonic DMW-BCK7E):

Information for your safety

Voltage/capacity:	3.6 V/680 mAh
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This product incorporates the following software:

- (1) the software developed independently by or for Panasonic Corporation,
- (2) the software owned by third party and licensed to Panasonic Corporation and/or,
- (3) open sourced software including the software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>), and the software written by Eric Young (eay@cryptsoft.com).

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